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THE DETERMINING FACTORS OF THE CURRICULUM OF THE SECONDARY SCHOOL¹

SINCE the days of ancient Greece the curriculum of the secondary school has undergone many changes. As educational ideals have been modified, at times even to the point of revolution, so courses of study have been as often recast. One of the most encouraging truths which is revealed by even a dilettantish study of the history of education is that a compulsory curriculum for all succeeding generations of men is not only undesirable, but also positively impossible. This paper, therefore, without attempting to set up a curriculum to be worshiped by the schoolmasters of the present and the future, will be restricted to the discussion of general principles which should guide intelligent authorities in mapping out the work of the secondary school. These principles will be briefly discussed under two heads, viz.: (1) civilization as a great determining factor; and (2) the individual student to be educated as the other.

I. CIVILIZATION AS A DETERMINING FACTOR.

The school is not an artificial institution existing for and by itself. It finds its reason-to-be in the needs of civilized life, and its chief glory in administering to those needs. Man is pre-eminent in the animal kingdom because he is an institution-building animal, his highest wisdom being displayed when he perfects the school, by which insight is attained into other forms of institutional life, and by which, as a result of this insight, civilization is strengthened and enriched. If the doctrine be accepted that the school is maintained for the sake of civilization, it follows that the arbitrary, artificial curriculum, born of pedantry, or of zeal not according to knowledge, or of anything else tending to divorce the school from the world and its work, is not to be tolerated. The one great question, the correct answer to which will determine the culture-material seeking

¹ A paper read before the Texas State Teachers' Association.

recognition in the secondary school is : *Does it have such characteristics as give it organic relationship with the development of man for intelligent and effective service in and for civilization?*

It would not be difficult to frame a curriculum which would conduce more or less to the training of the so-called faculties of the mind, and which would, nevertheless, have little, if any, value so far as the demands of civilized life are concerned. As illustrations of this truth, one easily calls to mind the folly of scholasticism and of all forms of ascetic education. The important fact to be kept steadily in mind, is that it is the civilization of the present (emphasis being placed, of course, upon its higher elements which are ever looking forward to the evolution of the future civilization from that of the present), which is to exercise determining power with respect to the studies to be assigned to the secondary school. The emperor of Germany, in his opening address at the famous school conference in 1890, manifests at least partial comprehension of the importance of adjusting school programs to modern needs, as the following extract from that address gives evidence :

The main trouble lies in the fact that since 1870 the philologists have sat in their *Gymnasien* as *beati possidentes*, laying main stress upon the subject-matter, upon the learning and the knowing, but not upon the formation of character and upon the needs of life. Less emphasis is being placed upon practice [*können*] than theory [*kennen*], a fact that can easily be verified by looking at the requirements for examinations. Their underlying principle is that the pupil must, first of all, know as many things as possible. Whether this knowledge fits for life or not, is immaterial. If anyone enters into a discussion with these gentlemen on this point, and attempts to show them that a young man ought to be prepared, to some extent at least, for life and its manifold problems, they will tell him that such is not the function of the school, its principal aim being the discipline or gymnastic of the mind, and that, if this gymnastic were properly conducted, the young man would be capable of doing all that is necessary in life. I am of the opinion that we can no longer be guided by this doctrine.

To return to schools in general and to the *Gymnasium* in particular—I will say that I am not ignorant of the fact that in many circles I am looked upon as a fanatical opponent of the *Gymnasium*, and that I have therefore often been played as a trump-card in favor of other schools. Gentlemen, this is a misapprehension. Whoever has been a pupil of a *Gymnasium* himself, and has looked behind the scenes, knows where the wrong lies. First

of all, a national basis is wanting. The foundation of our *Gymnasium* must be German. It is our duty to educate men to become young Germans, and not young Greeks or Romans. We must relinquish the basis which has been the rule for centuries, the old monastic education of the middle ages, when Latin and a little Greek [*einbisschen Griechisch*] were most important. These are no longer our standard ; we must make German the basis, and German composition must be made the center around which everything else revolves.¹

I have intimated that the German emperor's insight into the matter at issue was only partial. His idea that the schools of the German nation are to cultivate Germans, should it have free and unlimited course would forever arrest the development of Germany at the civic grade of culture, making it then impossible for her to arrive at the higher stage of human culture, which is the dominant idea in modern civilization. The doctrine for which this paper contends is, not that the school should make only Germans, or Americans, or Englishmen, but that the all-controlling purpose of the schools of every nation should be to make men who, by no means delinquent with respect to civic duties, have an abiding sense of their obligations to humanity. The lives of such men are in harmony with the spirit and the letter of the declaration of the Roman emperor, "As Antonine, my country is Rome ; as a man, the world."

It is this doctrine of real humanism in which Huxley believed, his faith being nowhere more clearly expressed than in this paragraph, to be found in his address delivered in 1868 at the South London Working Men's College :

The politicians tell us that you must educate the masses because they are going to be masters. The clergy join in the cry for education, for they affirm that the people are drifting away from church and chapel into the broadest infidelity. The manufacturers and the capitalists swell the chorus lustily. They declare that ignorance makes bad workmen, that England will soon be unable to turn out cotton goods or steam engines cheaper than other people ; and then Ichabod ! Ichabod ! the glory will be departed from us. A few voices are lifted up in favor of the doctrine that the masses should be educated because they are men and women with unlimited capacities for being, doing, and suffering, and that it is as true now as it ever was, that the people perish for lack of knowledge.²

¹ *Educational Review*, Vol. I, pp. 202-3.

² HUXLEY, *Science and Education Essays*, p. 77.

Huxley was too broad to be only a Briton. He understood that the common element in humanity, reason, is that which makes human culture possible, and that, in proportion as this element, rather than the accidental circumstance of nativity or race, or power, or wealth, is honored in a nation, is the true life of the nation advanced and are the higher interests of humanity subserved. One could not, for example, doubt that if both the British and the Boers had been guided by the dictates of reason, the war in South Africa would have been impossible; and that, if Spain in her conduct toward the Cubans had been reasonable, she would not have lost her possessions in the western world.

The contention that the curriculum of the secondary school should be fashioned according to the ideals of modern life, implies that past systems of education in their totality are to be looked upon with suspicion, for they prevailed in times far different from our own, and they were maintained to suit views of life in many particulars directly at variance with the notions we moderns cherish. It is not contended, however, that everything in the past is to be ignored, simply because it is in the past. One can conceive of no stronger evidence of educational insanity than failure to recognize that the present is the result of evolution from the past, and that existing ideals are but the union of past ideals which, by reason of their permanent value, have survived.

Taking it for granted that no one will question the claim of modern civilization to be a determining factor in the formation of the curriculum of the modern secondary school, it may be well to review the more important particular lines of culture this factor determines.

In the first place, training in language is of primary importance. As Aristotle pointed out centuries ago, language, constituting as it does a characteristic difference between man and brute, makes possible bonds of social union founded upon the needs other than those of mere nature, and consequently furnishes an indispensable basis for human culture. It is through the real study of language that insight is to be gained into the nature of thought, and it is, therefore, language-study that forms

an important part of the great thought-group of studies in the world of learning. Any instruction in language which regards the mere forms of thought as of transcendent importance, and which disregards the real thought itself, tends to cultivate a habit largely prevalent even in our own day, the habit of talking volubly without actually saying anything.

The study of language, furthermore, furnishes the means whereby the pupil may become possessed of that great inheritance to which he is entitled, and which embraces the greatest of all the arts, literature. There is no surer evidence of the highly civilized man than that he is a lover and a reader of the best books, those books which reveal with transcendent beauty and power the struggles of the human spirit toward the realization of its highest ideals. If the educational system of the old Greeks has in it any lesson for the schoolmaster of today, it is this: The nation which cultivates assiduously in the minds of the young the knowledge and appreciation of great classics is engaged in a work of the highest practical importance, for it is doing that which vitally affects its own moral and spiritual welfare, and it is as true with respect to nations as to individuals that only moral and spiritual excellence can endure—a truth which may be overlooked in these days of territorial expansion, of billion-dollar industrial investments, and of stupendous material development in every direction.

The subject of language-study may be looked at from another standpoint. In the elementary school the pupil learns in an empirical and fragmentary way something of his own language; in the secondary school he should begin the reflective study of the vernacular in order that he may eventually gain such mastery of it as will insure him the ability to use it with ease, precision and power. The belief, widespread for many centuries, that the youth could, without sustained and systematic effort, acquire this ability, has not until our own day manifested signs of obsolescence. Leaders of educational thought are now, however, agreed that the "acquisition of a competent knowledge of English is not an easy, but a laborious undertaking, for the average youth—not a matter of entertaining reading, but of serious study; that

indeed there is no subject in which skilled and systematic instruction is of greater value."¹ With respect to paying serious attention to the vernacular, the ancient Greeks have given the world another valuable lesson, for their linguistic training was acquired exclusively through the medium of their own tongue, other languages being absolutely proscribed.

The folly of attempting to substitute a foreign language for the vernacular in the training of the young is nowhere illustrated better than in the utter failure of the famous schoolmaster, Sturm, in his experiment, carried on for a long series of years in Strasburg. With a determination which would brook no opposition, he endeavored to restore the long-lost skill in the use of the two great languages of the Greeks and Romans. He, accordingly, prohibited both teachers and pupils from conversation in German. Even games were not permissible without the condition that the speech employed therein be confined to Latin. His aim, which was to denationalize the young Germans, was not forgotten by him for a moment. His lengthy and detailed directions to the teachers of the several grades in every instance had direct bearing upon the accomplishment of his great purpose, which was to see the men of his own age writing, haranguing, and speaking Greek and Latin with power equal to that which flourished in the noblest days of Athens and Rome. After a long series of years spent in earnest endeavor to accomplish his cherished idea, he himself confessed his total failure; but, strange to say, he ascribed the cause of failure to the teachers and himself, and not to the fact that Latin was not the native tongue of the boys he had been training. Nevertheless, even Sturm could not help realizing that eloquence is by no means confined to Latin, for he observed that Italians, Spaniards, Frenchmen and Germans could be eloquent in their own tongues. With respect to Luther, he said:

"Had there been no Reformation, had the sermons of Luther never appeared, and had he written nothing at all save his translation of the Bible, this alone would have insured him an immortality of fame. For, if we compare with this German translation either the Greek, the Latin, or any other,

¹ ELIOT, *Educational Reform*, pp. 99, 100.

we shall find that they are all far behind it both in perspicuity, purity, choice of expression, and resemblance to the Hebrew original. I believe that, as no painter has ever been able to surpass Apelles, so no scholar will ever be able to produce a translation of the Bible that shall excel Luther's."¹

But, because the work of the world demands that each worker be familiar with his own language, and be able to levy great contributions upon it, it is by no means certain that the modern secondary school should be patterned after that of ancient Greece by forbidding the study of a foreign language. The Committee on College Entrance Requirements, in its report made to the National Education Association in 1899, is distinctly favorable to the study of foreign language. It is not necessary, I take it, to enter into an extended argument to show the justice of this position. The value of the literatures of Greece and Rome can be questioned by no scholar. How these literatures are inextricably interwoven with the modern literatures is evident upon the most superficial examination. It is, therefore, easy to conclude that the study of ancient literature will directly, as well as indirectly, aid one in the appreciation of modern. Furthermore, the linguistic training to be derived from the study of a foreign language, ancient or modern, is of positive value with respect to the vernacular. There is no better training in English than that which requires a translation from a foreign tongue into the idiom of our vernacular. The opinion is here advanced that by high-school students that will not go to college, as well as by those that will have the privilege of instruction in higher institutions, benefit of the highest order is to be derived from three or four year's study of at least one foreign language.

Another human nature study which is demanded by modern times is that of history. The value of this subject with respect to guidance and also to discipline has in recent years been acknowledged. History is not concerned so much with names and dates and isolated facts, as it is with human motives connected therewith. It is not so much interested in any given set of details as it is with the principles by which those concrete data are bound together in a series of causes and results. The study of history should, therefore, afford the student a basis for the interpretation of modern life. It is believed that the stage of adolescence, which is the high-school stage, is a particularly opportune time for the study of that subject which deals with the significance of human action, and which gives to the youth entering upon the transition stage just preceding manhood conceptions of many-sided human nature. In the elementary

¹ BARNARD, *German Teachers and Educators*, p. 222.

school the child is taught through stories and narratives and biographies many things which will be of service in his future historical study ; but it must be borne in mind that this elementary work is scarcely to be considered as real history. The world needs men that are students of relations, that can gather facts, classify them, and interpret them, and that can understand processes of transformation of idea into reality. Certainly, there is no greater demand made upon the citizen of a modern state than to be able to do just such thinking as is required in anything like an adequate study of history.

It is not necessary to discuss at length other secondary-school subjects determined by modern civilization ; but they cannot be dismissed without a word. The intricate and almost infinite application of mathematics to the industrial arts is sufficient justification for its place in the program of the secondary school. Mathematics is the tool by which man has conquered nature, and it must forever remain an effective instrument for ministering to man's comfort and convenience. Its disciplinary value has been greatly overrated, because it has been believed to extend to fields of discipline to which, by reason of its nature and limitations, it must forever be foreign ; but its value for the training of observation and reasoning with respect to the phenomena of its own field, is incalculable and indispensable, and civilization is in no whimsical mood when she demands that the school afford excellent opportunity for the acquirement of mathematical knowledge and discipline.

The great natural-science realm of learning has likewise received the unmistakable approval of modern civilization. The time was when it was considered unworthy and even impious to study the phenomena of nature. Within the last century, however, through the marvelous contributions of science, she has demonstrated her worth as a necessary factor in human life. It may be truly asserted that more and greater changes have been wrought by science upon our material life within the last few years than have been wrought in any thousand years before the nineteenth century. It may be said, furthermore, that the method of science, as well as its progress, has no small effect

upon the spiritual side of man, for its method is the only true method to be employed in the study of any problem, endeavoring, as it does, to cultivate an open attitude of mind, the love of truth, the willingness to adopt it, and the courage to stand for it. If the school is to be kept in touch with real life, it cannot afford to neglect this great group of subjects, which is admirably adapted to give the youth such training as will enable him to feel at home in this world, and to face it at least without fear.

Again, the needs of modern life make large drafts upon the physical forces of man. In no former age of the world have health and strength and endurance been so desirable and so necessary. That the obligations to meet these demands are scarcely acknowledged by the makers of school programs, is no evidence that the obligation does not exist. It has been demonstrated beyond all doubt, and over and over again, that development of mind without training of the body is a useless, not to say a wicked, system of education, and yet adequate provision for physical training is to be found in comparatively few secondary schools in America. Here is an opportunity for a reform to be led by an educational crusader worthy to rank with Pestalozzi and Horace Mann.

Let me briefly recapitulate the discussion up to this point : (1) Civilization is a determining factor of the curriculum of the secondary school. (2) The civilization that is a determining factor is modern civilization. (3) Modern civilization requires that the secondary school curriculum provide (*a*) for physical training ; (*b*) for language, including the vernacular and foreign tongues ; (*c*) for representatives of other great groups of subjects pertaining to human nature ; and (*d*) for yet other groups of studies relating to the natural world.

To summarize the whole matter, modern civilization requires that the many-sided phases of modern life which are concerned with problems pertaining to the external and internal worlds, be considered as the objective basis of the curriculum, and that due regard be paid to each of these several phases. To adopt a fragmentary view by over-emphasising a study adapted to one

phase only, is the result of distorted vision, and will, in the end, defeat its own purpose. All forms of human activity are sacred, and all subjects having for their ultimate purpose the development of these several activities are equally important and honorable.

But, while it is demanded that representatives of all the great groups of learning be found in the school curriculum, our civilization, more than any other the world has ever known, believes in the wisdom of division of labor, and, consequently does not ask that the curriculum be the same for all pupils, regardless of qualifications and regardless of individual characteristics and interests. This statement leads to the discussion of the second determining factor of the curriculum of the secondary school.

II. THE INDIVIDUAL AS A DETERMINING FACTOR.

By wise men who are guilty of the folly of setting up a theory and then compelling facts to conform thereto, it is argued that the wisdom and experience of schoolmasters should, at least by this time, have been able to evolve a uniform course of study well suited to all youths aspiring to a liberal education. The human mind is ever searching for unifying principles, and it is no wonder that it has been a favorite doctrine of educators that there is one plan of education, in comparison with which other schemes are decidedly inferior. For years in the olden time the trivium, consisting of grammar, rhetoric, and dialectics, was considered the sacred trinity of the secondary school; and it is a well-known fact that since the curriculum of the Renaissance was enthroned in the pedagogic heart, many of the greatest scholars and greatest teachers have honestly believed that in Latin, Greek and mathematics is to be found another sacred trinity, and that they are the only disciplinary studies *par excellence*. No one can exaggerate the blessings to the human race following the discovery of the languages and literature of Greece and Rome. For the revival of humanism, whose chief instruments were the classics, the modern world cannot have too great reverence; of the intrinsic values of Latin and Greek and mathematics as instruments of culture today, it

would be difficult to form too high an estimate. But, in order to accord high honor to these three subjects it is not necessary to declare that they shall be studied by all people desirous of obtaining a thorough education. To prescribe them for all students simply because of their disciplinary value is assuming that all minds are patterned after a common mold and are, therefore, responsive to the same forms of discipline. The belief that there is a uniform boy is a myth, and any system of education founded upon that myth is irrational.

It is just at this point that the modern graded school system is most vulnerable. The greatest weakness of that system, and the one which in recent years has been most clearly pointed out, is the policy which makes the idea of uniformity dominant, the policy which is founded upon the delusion which contends that all children are born with equal and like powers of mind, and that the same treatment of these powers in different individuals will produce the same results. Now, upon even slight observation and reflection, every one reaches the conclusion that children are not born equal as to mental power any more than they come into this world equal with respect to physical being. Everyone knows that even children found in the same family manifest the greatest differences as to mental characteristics and adaptations. Any institution, therefore, which by uniform treatment seeks to destroy the personality of the individual, is pursuing a policy which prevents both the individual and society from enjoying the development of his peculiar talents to the highest degree.

In the selection of culture-material for the elementary school, it is not so necessary to regard the characteristic differences of children, because the elementary course of study is primarily intended to place the child in possession of the school arts, which he will afterward use regardless of the branches of learning his special powers and interests may lead him to undertake. This view with respect to the elementary school is itself questioned by some; but the student in the secondary school has certainly reached the age when he begins to disclose his individual interests, and school authorities can perform no greater service to him and to the world than to furnish him abundant

opportunity to follow the lead of his special aptitudes. If the secondary school were so conducted as to convince parents that it furnishes every youth what is best for himself, and if the youth were likewise possessed of the same idea, we would never again be called upon to listen to a series of answers to the question, Why are so few boys to be found in the higher grades of the public schools?

That colleges and universities are recognizing the wisdom of consulting the needs of the individual is evidenced by the fact that their courses of study are largely optional. In our own country there is not a reputable institution of higher learning in which the old four-year curriculum, prescribed for all students, obtains. In Germany for many years absolutely free election of university courses has prevailed. The American universities have further shown their disregard of the idea of uniformity by allowing different studies to be presented for entrance. The president of the oldest university in this country, in his annual report of 1896-7, thus expressed the view which has year by year been gaining in popularity among thoughtful students of education:

The future attitude of Harvard is likely to be, not continued insistence upon certain school studies as essential preparation for college, but insistence that the gate to university education should not be closed on the candidate in consequence of his omission at school of any particular studies, provided that his school course has been so composed as to afford him a sound training of some sort. . . . Harvard University has long represented the principle of election of college studies, and had found nothing but advantage in the application of that principle. It is natural that the college should seek to further the adoption of the same principle in secondary schools and in requirements for admission to college.

The University of Texas is in harmony with the modern view on this subject, for the only absolute requirements for entrance are English and elementary mathematics (algebra and plain geometry). The history requirement may be absolved in four different ways—by presenting general history or American history or English history or by a combination of English and American history. The other entrance requirements are elective. Of foreign languages one or more may be selected from

the group composed of Latin, Greek, French, German, and Spanish, and the privilege of election is extended with respect to the natural sciences, physiology and hygiene, physical geography, botany, physics, and chemistry.

The chief objection urged against any attempt to consult the special preference and capacity of the high-school pupil is the contention that the policy of election, founded, as it is, upon the doctrine of interest, will lead the pupil to avoid the performance of any task not particularly agreeable to himself. Now, no one questions the great desirability of training the student to habits of industry. Educational thinkers of every faith and order unite in the belief that all the functions of the school have ultimately but one purpose—to add to the number of the world's patient, continuous, effective workers; but the objection just now mentioned does not correctly represent the results of the application of the principle of election. The charge itself is open to criticism, for it is founded upon a misconception of the doctrine it attacks. The great value derived from the performance of a disagreeable task arises, not from the fact that the task is disagreeable, but because it is organically related with a desirable object. The adult whose life is one round of disagreeable acts, having no connection with agreeable results, is not living the life a human being ought to live, but is dragging out a miserable existence, from which all joy and hope are eliminated, and compared with which such slavery as existed in the southern states is a paradise. The truth is, that even the ascetic of old daily persecuted his body, not because he rejoiced in suffering *per se*, but because he gloried in ordering his life in such a way as he believed would eventually place his feet upon the spiritual mountain-tops, and give him visions of glory for which his soul had long been yearning.

Again, the etymology of the word "interest" (*inter* and *est*) discloses its educational significance. Any study becomes full of interest in the pedagogic sense when the student rightly considers it vitally connected with the process of his own self-realization. If this vital connection be not clearly perceived by him, or at least strongly believed by him to exist, the funda-

mental motive to strong and persistent effort is lost. Seeing no justification for the burdens laid upon him in prosecuting the study, he refuses to bear them altogether or he expends his energies in devising ways and means to bear as few of them as possible. The compulsory pursuit of any distasteful study thus leads the pupil to be satisfied with only partial scholastic success, and leaves with him no stimulus to prosecute that subject in its higher aspects. At the earliest opportunity he will not only refuse to press forward to complete mastery, but, in conformity with a well-known law of the mind, he will also proceed to divest himself as nearly as may be, of what little knowledge or discipline he may have suffered himself to acquire. This psychological principle is well expressed by Vergil, when he puts into the mouth of Æneas the words, "animus meminisse horret, luctuque refugit."¹

To what extent the adaptation of the curriculum to the individual student should be carried, is a problem to which many solutions may be offered; but the doctrine which this paper seeks to emphasize is that, no matter what answer be given to the question concerning the degree of election in the secondary school, some form of election, by the student, by his parents, by his teachers, or by them all acting conjointly, is indispensable if his own capacity and special talents are to be considered and developed.

The two fundamental doctrines which have been treated in this paper, constitute an indestructible foundation for the curriculum of the secondary school. Local conditions, and others not so local, now prevent the adequate application of these doctrines; but there is abundant evidence to justify the belief that the future has in store a day when the secondary school will discharge every reasonable obligation to the individual pupil and to the civilization of which his life is to be a component part. To help speed the coming of that day is the pleasure, as it is the duty, of every lover of learning and every lover of man.

W. S. SUTTON.

THE UNIVERSITY OF TEXAS.

¹ VERGIL, *Æneid*, Bk. II., l. 12.